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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-69-AD; Amendment 39-12783; AD 2002-12-11]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model DHC-8-100, -200, and -300 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Bombardier Model DHC-8-100, -200, and -300 series airplanes, that requires revision of the applicable maintenance program manual, repetitive inspections for corrosion or cracking of the hook roller shafts of the flap carriage, and eventual replacement of the hook roller shafts with new or serviceable hook roller shafts. This replacement extends the interval for the repetitive inspections. This action is necessary to prevent cracking of the hook roller shafts of the flap carriage and consequent reduced structural integrity of the flap, which could result in jamming of the flap. This action is intended to address the identified unsafe condition.

DATES: Effective July 31, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 31, 2002.

ADDRESSES: The service information referenced in this AD may be obtained from Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Dan Parrillo, Aerospace Engineer, Airframe and Propulsion Branch, ANE-172, FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256-7505; fax (516) 568-2716.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Bombardier Model DHC-8-100, -200, and -300 series airplanes was published in the Federal Register on March 21, 2002 (67 FR 13108). That action proposed to require revision of the applicable maintenance program manual; repetitive inspections for corrosion or cracking of the hook roller shafts of the flap carriage; and eventual replacement of the hook roller shafts with new or serviceable hook roller shafts, which would extend the interval for the repetitive inspections.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Explanation of Change to Final Rule

The FAA has revised paragraph (a) of the final rule to clarify that the maintenance manual revision must be accomplished according to the applicable temporary revision listed in paragraph (a)(1), (a)(2), or (a)(3) of the AD.

Conclusion

After careful review of the available data, the FAA has determined that air safety and the public interest require the adoption of the rule with the change described previously. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

The FAA estimates that 183 airplanes of U.S. registry will be affected by this AD.

It will take approximately 4 work hours per airplane to accomplish the required inspection, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the required inspection on U.S. operators is estimated to be $43,920, or $240 per airplane, per inspection cycle.

It will take approximately 4 work hours per airplane to accomplish the required replacement, at an average labor rate of $60 per work hour. Required parts will cost approximately $460 per airplane. Based on these figures, the cost impact of the required replacement on U.S. operators is estimated to be $128,100, or $700 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-12-11 Bombardier, Inc. (Formerly de Havilland, Inc.): Amendment 39-12783. Docket 2001-NM-69-AD.

Applicability: Model DHC-8-100, -200, and -300 series airplanes; serial numbers 3 through 555 inclusive; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent cracking of the hook roller shafts of the flap carriage and consequent reduced structural integrity of the flap, which could result in jamming of the flap, accomplish the following:

Revision of Maintenance Program Manual

(a) Within 30 days after the effective date of this AD, accomplish paragraph (a)(1), (a)(2), or (a)(3) of this AD according to the service information specified, as applicable.

(1) For Model DHC-8-100 series airplanes: Insert de Havilland Inc. Dash 8 Airworthiness Limitations List Temporary Revisions (TRs) AWL-75 and AWL-76, both dated July 14, 2000, into de Havilland Inc. Dash 8 Series 100 Maintenance Program Manual PSM 1-8-7.

(2) For Model DHC-8-200 series airplanes: Insert de Havilland Inc. Airworthiness Limitations List TR AWL 2-19, dated July 14, 2000, into de Havilland Inc. Dash 8 Series 200 Maintenance Program Manual PSM 1-82-7.

(3) For Model DHC-8-300 series airplanes: Insert de Havilland Inc. Airworthiness Limitations List TR AWL 3-83, dated July 14, 2000, into de Havilland Inc. Dash 8 Series 300 Maintenance Program Manual PSM 1-83-7.

Repetitive Inspections

(b) Do a detailed inspection for corrosion or cracking of the hook roller shafts of the flap carriage, at the times specified in paragraph (b)(1), (b)(2), or (b)(3) of this AD, as applicable; and according to the service information in paragraph (b)(1), (b)(2), or (b)(3) of this AD, as applicable.

Note 2: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) For Model DHC-8-100 series airplanes: For Pre Mod 8Q101103 roller shafts having part number (P/N) 85750362-103 or 85750362-105, do the initial inspection at the compliance time specified in the "Threshold" column of the table in de Havilland Inc. Airworthiness Limitations List TRs AWL-75 and AWL-76, both dated July 14, 2000, or within 12 months after the effective date of this AD, whichever occurs later; according to de Havilland Inc. Dash 8 Series 100 Maintenance Program Manual PSM 1-8-7. Thereafter, repeat the inspection at the applicable interval specified in the "Initial Interval" column of the table in TR AWL-75 and AWL -76, until the airplane reaches the applicable threshold listed in the "Repeat Cut-In" column of the table in TR AWL-75 and AWL-76. Thereafter, repeat the inspections at the applicable interval listed in the "Repeat Interval" column of the table in TR AWL-75 and AWL -76, until paragraph (c) of this AD has been accomplished on all affected hook roller shafts. Where the TR specifies compliance intervals in "flights," for the purposes of this AD, "flights" means "flight cycles."

(2) For Model DHC-8-200 series airplanes: For Pre Mod 8Q101103 hook roller shafts having part number (P/N) 85750362-103 or 85750362-105, do the initial inspection at the compliance time specified in the "Threshold" column of the table in de Havilland Inc. Airworthiness Limitations List TR AWL 2-19, dated July 14, 2000, or within 12 months after the effective date of this AD, whichever occurs later; according to de Havilland Inc. Dash 8 Series 200 Maintenance Program Manual PSM 1-82-7. Thereafter, repeat the inspection at the applicable interval specified in the "Initial Interval" column of the table in TR AWL 2-19, until the airplane reaches the applicable threshold listed in the "Repeat Cut-In" column of the table in TR AWL 2-19. Thereafter, repeat the inspections at the applicable interval listed in the "Repeat Interval" column of the table in TR AWL 2-19, until paragraph (c) of this AD has been accomplished on all affected hook roller shafts. Where the TR specifies compliance intervals in "flights," for the purposes of this AD, "flights" means "flight cycles."

(3) For Model DHC-8-300 series airplanes: For Pre Mod 8Q101103 hook roller shafts having part number (P/N) 85750362-103 or 85750362-105, do the initial inspection at the compliance time specified in the "Threshold" column of the table in de Havilland Inc. Airworthiness Limitations List TR AWL 3-83, or within 12 months after the effective date of this AD, whichever occurs later; according to de Havilland Inc. Dash 8 Series 300 Maintenance Program Manual PSM 1-83-7, dated July 14, 2000. Thereafter, repeat the inspection at the applicable interval specified in the "Initial Interval" column of the table in TR AWL 3-83, until the airplane reaches the applicable threshold listed in the "Repeat Cut-In" column of the table in TR AWL 3-83. Thereafter, repeat the inspections at the applicable interval listed in the "Repeat Interval" column of the table in TR AWL 3-83 until paragraph (c) of this AD has been accomplished on all affected hook roller shafts. Where the TR specifies compliance intervals in "flights," for the purposes of this AD, "flights" means "flight cycles."

Replacement

(c) At the applicable time specified in paragraph (c)(1) or (c)(2) of this AD, replace hook roller shafts having P/N 85750362-103 or 85750362-105 with new or serviceable hook roller shafts having P/N 85750362-107, according to Sections 57-50-44 and 57-50-53 of the de Havilland Inc. Dash 8 Aircraft Maintenance Manual, as applicable. Replacement of all hook roller shafts, P/N 85750362-103 or 85750362-105, with new hook roller shafts, P/N 85750362-107, ends the repetitive inspections at the intervals required by paragraph (b) of this AD.

(1) For hook roller shafts on which any corrosion or crack is found during any inspection per paragraph (b) of this AD: Do the replacement before further flight.

(2) For uncracked or uncorroded hook roller shafts: Do the replacement within 20,000 flight cycles or 5 years after the effective date of this AD, whichever is first.

Post-Replacement Inspections

(d) Following the replacement of hook roller shafts according to paragraph (c) of this AD, do the Structural Inspection Program for the hook roller shafts of the flap carriage, as specified in paragraph (d)(1), (d)(2), or (d)(3) of this AD, as applicable.

(1) For Model DHC-8-100 series airplanes: Using the criteria for Mod 8Q101103 hook roller shafts having P/N 85750362-107, do the initial inspection at the compliance time specified in the "Threshold" column of the table in de Havilland Inc. Airworthiness Limitations List TR AWL-75 and AWL "76, both dated July 14, 2000, according to de Havilland Inc. Dash 8 Series 100 Maintenance Program Manual PSM 1-8-7. Thereafter, repeat the inspection at the applicable interval specified in the "Initial Interval" column of the table in TRs AWL-75 and AWL-76, until the airplane reaches the applicable threshold listed in the "Repeat Cut-In" column of the table in TRs AWL-75 and AWL-76. Thereafter, repeat the inspections at the applicable interval listed in the "Repeat Interval" column of the table in TRs AWL-75 and AWL-76. Where the TR specifies compliance intervals in "flights," for the purposes of this AD, "flights" means "flight cycles."

(2) For Model DHC-8-200 series airplanes: Using the criteria for Mod 8Q101103 hook roller shafts having P/N 85750362-107, do the initial inspection at the compliance time specified in the "Threshold" column of the table in de Havilland Inc. Airworthiness Limitations List TR AWL 2-19, dated July 14, 2000, according to de Havilland Inc. Dash 8 Series 200 Maintenance Program Manual PSM 1-82-7. Thereafter, repeat the inspection at the applicable interval specified in the "Initial Interval" column of the table in TR AWL 2-19, until the airplane reaches the applicable threshold listed in the "Repeat Cut-In" column of the table in TR AWL 2-19. Thereafter, repeat the inspections at the applicable interval listed in the "Repeat Interval" column of the table in TR AWL 2-19. Where the TR specifies compliance intervals in "flights," for the purposes of this AD, "flights" means "flight cycles."

(3) For Model DHC-8-300 series airplanes: Using the criteria for Mod 8Q101103 hook roller shafts having P/N 85750362-107, do the initial inspection at the compliance time specified in the "Threshold" column of the table in de Havilland Inc. Airworthiness Limitations List TR AWL 3-83, dated July 14, 2000, according to de Havilland Inc. Dash 8 Series 300 Maintenance Program Manual PSM 1-83-7. Thereafter, repeat the inspection at the applicable interval specified in the "Initial Interval" column of the table in TR AWL 3-83, until the airplane reaches the applicable threshold listed in the "Repeat Cut-In" column of the table in TR AWL 3-83. Thereafter, repeat the inspections at the applicable interval listed in the "Repeat Interval" column of the table in TR AWL 3-83. Where the TR specifies compliance intervals in "flights," for the purposes of this AD, "flights" means "flight cycles."

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(g) The maintenance program manual revision shall be done in accordance with de Havilland Inc. Dash 8 Airworthiness Limitations List Temporary Revision AWL-75, dated July 14, 2000; de Havilland Inc. Dash 8 Airworthiness Limitations List Temporary Revision AWL-76, dated July 14, 2000; de Havilland Inc. Airworthiness Limitations List Temporary Revision AWL 2-19, dated July 14, 2000; and de Havilland Inc. Airworthiness Limitations List Temporary Revision AWL 3-83, dated July 14, 2000; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Note 4: The subject of this AD is addressed in Canadian airworthiness directive CF-1999-10R2, dated September 12, 2000.

Effective Date

(h) This amendment becomes effective on July 31, 2002.

Issued in Renton, Washington, on June 7, 2002.
Ali Bahrami,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
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